Result Page

Description

Composition for a hair treatment means in form of an aerosol foam the subject of the invention is a composition for a hair treatment means, which is preferably present in form of an optically clear, transparent or translucent product and is used as aerosol foam.

The means can be center a hair-maintaining in particular) and istals Leave in hair cure or < RTI ID=1.1> as Haarspülung< /RTI> applicably. The composition has a content of certain Assoziativverdickern and propellants as well as if necessary cation-active, hair-maintaining materials and hydrophilic Silikonen.

Usual hair-conditioning preparations such as Rinse off cures or Leave on Treatments are usually formulated on the basis of aqueous emulsions.

Substantial contents materials are cation-active substances such as z. B. kationische Tenside, hydrophobe substances such as z. B. Fettalkohole and others < RTI ID=1.2> Ölkompo < /RTI> nenten, emulsifying agents, as well as further specific Wirk-und of odoriferous substances. The most important components are thereby kationische Tenside, Fettalkohole and emulsifying agents. An overview of the structure in principle of < RTI ID=1.3> Kurspülungen< /RTI> and hair cures gives Schrader, ?bases and prescriptions of the Kosmetika?, 2.

Edition, 1989, pages 728 to 737. Major tasks of the conditioning means are the improvement of the combing barness, which < RTI ID=1.4> Combing barness, < /RTI> the gloss and the grasp of the treated hair. The treated hair feels frequently somewhat heavy and more loaded, which not always is desired. The conventional < RTI ID=1.5> O/W Haarkuremulsionen< /RTI> are in addition normally < RTI ID=1.6> milchig weiss< /RTI> and obscurely. Products, which are present in an optically more responding form and clearly, are desirable transparent or are at least translucent. Different forms of clear hair cure means are well-known and for example described in E. Repair, ?Cosmetic and Toiletry Formulations?, Second edition volume 2, pages 373 FF. These clear hair cure means are thickening on basis of working polymers such as z. B. Cellulose derivatives (trade names < RTI ID=2.1> Natrosol@ , Methocel@), hochmolekularen< /RTI> Chitosanderivaten (trade name < RTI ID=2.2> Kytamer'PC), < /RTI> complex Polysaccharіden (trade name Karaya Gum, Tragant, < RTI ID=2.3> Jaguare types, Keltrol types) and Acrylsäurepolymeri < /RTI> sowed manufactured. All these described clear hair cure means have the large disadvantage that the care effect is so weak that it does not < by far that of a classical; RTI ID=2.4> Haarkurmittels< /RTI> on basis of mixtures of Fettalkoholen and quaternären Tensiden reaches. This, after which admitted state of the art < RTI ID=2.5> clear Haarkurmittel< /RTI> sell themselves therefore on the market clearly more badly than the standard cures.

It was found that when using nichtionischen, amphiphilen Assoziativverdickern means to be manufactured to be able, which < the typical, to a hair conditioning means to requirements placing regarding hair conditioning to fulfill, at the same time in an optically responding form to be present be able and the hair a less heavy and loaded impression lend as after a treatment with a conventional; RTI ID=2.6> Kurmittel.< /RTI> It was however shown that with such means the Aufemulgieren < not yet completely during training into the hair; RTI ID=2.7> zufriedensteliend< /RTI> is. The product does not feel contentful enough, D. h. the emulsion quantity is too small.

It was now found that these disadvantages are repaired by a composition for a hair treatment means on basis of a combination of Assoziativverdickern with < RTI ID=2.8> for foam aerosols usual Treibmitteln.< /RTI> The subject of the invention is therefore a composition for a hair treatment means with a content of (A) at least a nichtionischen, amphiphilen associative-thick in a suitable cosmetic basis and (B) at least one propellant.

Preferably the composition according to invention contains additionally at least a hair-maintaining material (C), which contains at least an cation-active group and/or at least a hair-maintaining silicone connection (D), which contains at least a hydrophilic group. It was shown that the combination according to invention already shows also without Tensidzusatz a outstanding foam behavior and the combination for the production of foam aerosol products is suitable therefore in particular.

The associative-thick (A) preferably is in the composition according to invention in a quantity of 0, 1 to 5 thread. % ; particularly prefers from 0, 1 to 2 thread. % contain. The propellant preferably is in a quantity of 0, 05 to 40 thread. %, particularly prefers from 0, 2 to 10 thread. % contain. The cation-active material (C) is preferably < in a quantity of 0, in the composition according to invention; RTI ID=3.1> 01< /RTI> to 10, particularly prefers from 0, 1 to 5 thread. % and the silicone connection (D) in a quantity of preferably 0, 01 to 10 thread. , particularly prefers % from 0, 1 to 5 thread. % contain.

According to invention a Haarbehand< manufactured with the composition; RTI ID=3.2> lungsmittel erfüllt< /RTI> to a hair conditioning means regarding conditioning effect to requirements placing in best way and an improved Aufemulgieren shows with application. The hair is noticeably smoother and < after the treatment both in the damp and in the dry condition; RTI ID=3.3> Nasskämm < /RTI> barkeit is noticeably improved. Surprisingly to feel found that the thickener

permits to train kationische materials and the silicone connections mentioned without thereby negative Begleiteigenschaften of the thickener. The technical characteristics of the means according to invention exceed even still the characteristics of a conventional hair cure on basis of an aqueous emulsion of Fettalkoholen and quaternären Tensiden. Salon test in the half side comparison confirm erfindungsge< RTI ID=3.4> Mittel< would measure; /RTI> a better < RTI ID=3.5> Kämmbarkeit< /RTI> and < RTI ID=3.6> natürlicheres< /RTI> Feel the hair. That negative blunt grasp of the hair of Fettalkohol/Kationtensid mixtures, mostly which can be observed, eliminated with the means according to invention practically. The hair feels more easily and unloaded. Beyond that the combination according to invention in form makes foam possible of an aerosol that the means in an optically responding, clear formulation can be manufactured, which again the favourable packaging in a transparent container, for example from glass or transparent plastic, z. B. Polyethylene, polypropylene or < RTI ID=4.1> Polyethylenterephtalat ermöglicht.< /RTI> The application form as foam Aerosol is particularly favourable for hair treatment. The means without propellants filled up feels with training into the hair less contentful, it has a too small emulsion quantity. Tests with trained hairdressers showed that the application form < as foam aerosol clearly; RTI ID=4.2> präferiert< /RTI> becomes.

The nichtionische, amphiphile associative-thick (A) is a polymer, which contains both hydrophilic and hydrophobe groups. Water-soluble polymers are associative and have tensidartige hydrophobe components, which are able, itself in a hydrophilic to associate in particular aqueous medium both with itself and with other hydrophoben materials D. h. to step into reciprocal effect. The medium is thickened or gelled by the associative network resulting from it. Typically associative-thick manufactured by polymerization of Polyethylenoxid Prepolymeren and at least doubly functional, polykondensierbaren materials such as z. B. Isocyanates, whereby mono or Diole with large aryl, Alkyloder aryl/alkyl groups are inserted, in order to make the hydrophobe modification available. Preferential associative-thick are therefore hydrophob modified Polyalkylenglykole. Here the hydrophilic component is Polyoxyethylen however also < by Polyoxyalkyleneinheiten, vorzugwseise; RTI ID=4.3> Polyoxypropyleneinheiten< /RTI> or their mixture in an educated manner. The hydrophobe component becomes preferably out
Groups of hydrocarbons, z. B langkettigen alkyl groups, alkyl aryl or aryl alkyl groups in an educated manner.

Particularly preferential associative-thick are hydrophob modified Aminoplast
Polyether of copolymers. Concerning their structure and production on the WHERE one < RTI ID=5.1> 96/40815< /RTI> referred. In the WHERE 96/40815 water-dispersable or water-soluble copolymers become described, which are the reaction products one < RTI ID=5.2> acid-catalyzed Polykondensation< /RTI> from at least doubly functional < RTI ID=5.3> Aminoplastmonomeren< /RTI> and at least doubly < RTI ID=5.4> functional Alkylenpolyethern< /RTI> as well as simply functional connections with hydrophoben groups. Suitable aminoplastics are the figure 1 of the WHERE 96/40815 to be taken. The Glycolurilderivate of the formula X of the WHERE 96/40815 is particularly preferential. Suitable Alkylenpolyether is the figure 2 of the WHERE 96/40815 to be taken. Preferential Alkylenpolyether is Polyethylenoxiddiole. These can have a Ethoxylierungsgrad from 20 to 500, preferably 50 to 350, particularly preferentially from 100 to 250.

Suitable ones simply functional connections with hydrophoben groups are those the formula XIV of the WHERE 96/40815.

Suitable according to invention associative-thick are selected from polymers of the general formula (1)
EMI5.1
whereby Amp a Aminoplastmonomer means or the remainder of a Aminoplastoligomers of or polymer, AO for a group of alkyl oxides stands, for R for hydrogen, < RTI ID=5.5> C1-C4-Alkyl< /RTI> or < RTI ID=5.6> C1-C4-Acyl< /RTI> and x and y numbers stand for 1 are larger.

Particularly preferentially the reaction products are < RTI ID=5.7> säurekatalysierten< /RTI> Polycondensation of (A) Glykolurilen < RTI ID=5.8> aligemeinen formula (II), < /RTI>
EMI5.2
whereby R preferably stands for H or for OMe with (B) Polyethylenoxiddiolen of a Ethoxylierungsgrades from 20 to 500, preferably for 50 to 350, particularly preferentially from 100 to 250 as well as (C) of a hydrophoben alcohol, alkyl phenol, a Thiols, a Carboxamids, ethoxylierten if necessary, Carbamats or a hydrophoben carbonic acid, as they on the pages 17 to 19 of the WHERE 96/40815 are described.

Particularly preferential Glykoluril is 1, 3, 4, 6-Tetramethoxymethylglycoluril.

Suitable associative-thick are < such with the INCI designations Polyether1; RTI ID=6.1> PEG-180/Octoxynol-40/TMMG copolymer and PEG-180/Laureth-50/TMMG< /RTI> Copolymer and are < driven out by the company Süd-Chemie under the trade names; RTI ID=6.2> Pure Thixe rear spar, < /RTI> L and M.

Using propellants (B) are for example low alkanes, like z. B. n butane, i-butane and propane, or also their mixtures as well as Dimethylether or fluorocarbons such as F152a (1, 1-Difluorethan) or < RTI ID=6.3> F134 (Tetrafluorethan) < /RTI> as well as furthermore with the which are possible pressures gaseously available propellants, as for example N2, N20 and C02 as well as mixtures that propellants managing specified. Are preferential n-butane, i-butane and propane in particular propane/butane mixtures and Dimethylether as well as their mixtures.

The cation-active material (C) is a substance, which exhibits primary, secondary, tertiary or quaternären groups of amines a Substantivität due to of kationischen or kationisierbaren groups, in particular to human hair.

Suitable ones cation-active materials are selected from kationischen Tensiden, betainischen Tensiden, amphoteren Tensiden, cation-active polymers with kationischen or kationisierbaren groups, kationisch derivatisierten proteins, kationisch derivatisierten protein hydrolysates and betaine.

Suitable ones cation-active Tenside are Tenside, which contain a quaternäre group of ammonium. It can concern around kationische or amphotere, betainische Tenside. As cation-active material (C) kationische Tenside is particularly preferential. Suitable ones kationische Tenside contain amino groups or quaternisierte hydrophilic groups of ammonium, which carry a positive charge in solution and by < RTI ID=7.1> general formula (111) < /RTI> to be represented can, N (+) R1R2R3R4 X (-) (III) whereby g 1 to R4 alkoxy groups, Polyoxyalkylengruppen, Alkylamidogruppen, groups of hydroxyalkyls, groups of aryls or groups of alkene aryls with 1 to 22 C-atoms mean and < independently aliphatic groups, aromatic groups; RTI ID=7.2> X (~) ein< /RTI> Anion represents, for example a halogen, an acetate, a phosphate, a

nitrate or an alkyl sulfate, preferably a chloride. The aliphatic groups can contain additionally to the carbon atoms and the hydrogen atoms also cross connections or other groups as for example of hydroxy groups or further amino groups.

Examples of suitable kationische Tenside are the chloride or bromide of < RTI ID=7.3> Alkyldimethylbenzylammoniumsalzen, alkyl tri methyl ammonium salts, < /RTI> for example Cetyltrimethylammoniumchlorid or bromide, Tetradecyltrimethylammoniumchlorid or bromide, < RTI ID=7.4> Alkyldimethylhydroxyethylammoniumchloride< /RTI> or bromide, which < RTI ID=7.5> Dialkyldimethylammoniumchloride< /RTI> or bromide, Alkylpyridiniumsalze, for example Lauryl or Cetylpyridiniumchlorid, Alkylamidoethyltrimethylammoniumethersulfate as well as connections with a kationischem character such as amine oxides, for example alkyl methyl amine oxides or < RTI ID=7.6> Alkylaminoethyldimethylamin < /RTI> oxides. Cetyltrimethylammoniumchlorid, which < for example in form of a 26prozentigen aqueous solution under the trade name, are particularly preferential; RTI ID=7.7> Dehyquarte A< /RTI> from the company Henkel < RTI ID=7.8> KGaA, < /RTI> < RTI ID=7.9> Duesseldorf/Deutschland< /RTI> and under the trade name < RTI ID=7.10> Gene amines CTAC< /RTI> from the company < RTI ID=7.11> High steam turbine and gas turbine system, < /RTI> < RTI ID=7.12> Frankfurt/Deutschland< /RTI> as well as in form of a 50prozentigen solution in isopropanol under the trade name < RTI ID=7.13> Arquad 16-50< /RTI> by the company Akzo chemicals GmbH, < RTI ID=7.14> Düren/Deutschland< /RTI> one drives out.

Suitable ones kationische Tenside are also the so-called Esterquats. As Esterquats generally the quaternisierten is < RTI ID=8.1> Fettsäuretriethanolaminestersalze< /RTI> designated. Esterquats are for example admit from the WHERE 91/01295.

Esterquats of the general formula (VIII) are suitable R1CO (OCH2CH2) x-n (+) R3R4 (CH2CH2) y-R2 X (-) (VIII) whereby R'CO means a C6-bis C22-Acylgruppe hydroxysubstiuierte if necessary, < RTI ID=8.2> R2< /RTI> Hydrogen or one < RTI ID=8.3> R'CO Gruppe< /RTI> meant, R3 C1-bis C4 alkyl group or the group < RTI ID=8.4> (CH2CH20) < /RTI> < RTI ID=8.5> meant, R*< /RTI> one < RTI ID=8.6> C1-bis C4-Alkyl-< /RTI> group or the group < RTI ID=8.7> (CH2CH20) < /RTI> < RTI ID=8.8> q-R2 meant, X (~) ein< /RTI> suitable anion, for example halogen, alkyl sulfate or alkyl phosphate meant and x, y, z and q for numbers from 1 to 12 stand. Esterquats are particularly preferential, in which R'CO for one < RTI ID=8.9> C12-bis C20-Acylgruppe, R2 für< /RTI> a R'CO group, R3 for < RTI ID=8.10> CH2CH2OH, < /RTI> R4 for methyl and < RTI ID=8.11> X (~) for Methylsulfat< /RTI> and x and y the number of 1 stands means. Such connections are < under the trade names; RTI ID=8.12> Dehyquatf L, Dehyquarf< /RTI> F, < RTI ID=8.13> SchercoquatX and Tetranyle in the trade erhältlich.< /RTI>

Suitable ones amphotere Tenside are aliphatic < derivatives; RTI ID=8.14> quaternärer< /RTI> Ammonium, Phosphonium and Sulfoniumverbindungen of the formula < RTI ID=8.15> (IV) < /RTI>
EMI8.1
whereby R5 represents a geradkettige or verzweigtkettige alkyl, alkenyl or to group of hydroxyalkyls with 8 to 18 carbon atoms and 0 to approximately 10 ethyl oxide units and 0 to 1 Glycerineinheiten; Y a n, P-or S-haltige group is; R6 one alkyl or group of mono hydroxyalkyls with 1 to 3 carbon atoms is; x equal 1 is, if Y is a sulfur atom and is x equal to 2, if Y is a nitrogen atom or a phosphorus atom; R7 one alkyl or group of hydroxyalkyls with 1 to 4 carbon atoms is < and; RTI ID=9.1> Z a Carboxy) RK, Suifat, Phosphonat oder< /RTI> Group of phosphates represents.

Other amphotere Tenside such as betaines is just as suitable for the hair treatment means according to invention. Examples of betaines cover C8-bis C18-Alkylbetaine such as Cocodimethylcarboxymethylbetain, < RTI ID=9.2> Lauryldimethylcarboxymethylbetain, < /RTI> < RTI ID=9.3> Lauryidimethylalphacarboxyethylbetain, Cetyidimethylcarboxymethylbetain, Oleyidi < /RTI> methyl gamma carboxypropylbetain and < RTI ID=9.4> Lauryl to (2-hydroxypropyl) alphacarboxy < /RTI> ethyl betaine; C8-bis C18-Sulfobetaine such as Cocodimethylsulfopropylbetain, Stearyldimethylsulfopropylbetain, < RTI ID=9.5> Lauryidimethylsulfoethylbetain, Laurylbis (2-hydroxy-< /RTI> < RTI ID=9.6> ethyl) sulfopropylbetain< /RTI> ; < RTI ID=9.7> Carboxyiderivate< /RTI> < RTI ID=9.8> Imidazols, < /RTI> the C8-bis C18-Alkyl< RTI ID=9.9> dimethylammoniumacetate, < /RTI> the C8-bis < RTI ID=9.10> C18-Alkyldimethylcarbonylmethylammoni-< /RTI> < RTI ID=9.11> umsalze< /RTI> as well as the C8-bis < RTI ID=9.12> C18-Fettsäurealkylamidobetaine< /RTI> as for example < RTI ID=9.13> Kokosfettsäureamidopropylbetain, < /RTI> which for example in form 30% of a igen aqueous solution under the trade name < RTI ID=9.14> Tego Betain< /RTI> L7 of the company Goldschmidt AG driven out is < and; RTI ID=9.15> N-Kokosfettsäureamidoethyl-n [2 - (carb < /RTI> oxymethoxy) ethyl] - glycerin (CTFA name: < RTI ID=9.16> Cocoamphocarboxyglycinate), welches< /RTI> for example in form one < RTI ID=9.17> 50%igen aqueous Lösung< /RTI> under the trade name < RTI ID=9.18> Miranole C2M< /RTI> by the company Miranol Chemical of cost. Inc. one drives out.

With the suitable cation-active polymers it preferably concerns around hair-strengthening or hair-conditioning polymers. Suitable polymers of the component (C) contained preferably quaternäre groups of amines. The kationischen polymers can be Homo or copolymers, whereby the quaternären groups of nitrogens are contained preferably either in the polymer chain or as substituent at or several a that monomers. The groups of ammonium of containing monomers can be copolymerisiert with not kationischen monomers. Suitable ones kationische monomers are insatiated, radical polymerizable connections, which at least a kationische
Group carry, especially Vinylmonomere ammonium-substituted as to
Example Trialkylmethacryloxyalkylammonium, Trialkylacryloxyalkylammonium, < RTI ID=10.1> Dialkyldiallylammonium< /RTI> and quaternäre Vinylammoniummonomere with cyclischen, kationische nitrogens containing groups such as Pyridinium, Imidazolium or quaternäre Pyrrolidone, z. B. Alkylvinylimidazolium, Alkylvinylpyridinium, or Alkylvinylpyrrolidon of salts. The alkyl groups of these monomers are preferably low alkyl groups like for example C1-bis C7-Alkylgruppen, particularly prefer C1-bis C3-Alkylgruppen.

The groups of ammonium of containing monomers can be copolymerisiert with not kationischen monomers. Suitable Comonomere is for example acrylamide, Methacrylamid, Alkyl-und dialkyl acrylamide, Alkyl-und Dialkylmethacrylamid, < RTI ID=10.2> Alkyl acrylate, Alkylmethacrylat, Vinylcaprolacton, Vinylcaprolactam, < /RTI> Vinylpyrrolidon, Vinylester, z. B. Vinyl acetate, Vinylalkohol, propylene glycol or ethyl glycol, whereby preferably C1-bis C7-Alkylgruppen prefers the alkyl groups of these monomers, particularly C1-bis C3-Alkylgruppen is.

Suitable polymers with quaternären groups of amines are for example the polymers described in the CTFA Cosmetic Ingredient Dictionary under the designations Polyquaternium < such as MethylvinylimidazoliumchloridNinylpyrrolidon; RTI ID=10.3> Copolymer (Polyquaternium-16) < /RTI> or quaternisiertes Vinylpyrrolidon/Dimethyl< RTI ID=10.4> aminoethylmethacrylat copolymer (Polyquaternium-11). < /RTI>

By the kationischen polymers, which in center according to invention) to be contained can, are for example Vinylpyrrolidon/Dimethylaminoethylmethacrylatmethosulfat copolymer, which < under the trade names; RTI ID=10.5> Gafquate< /RTI> 755 N and < RTI ID=10.6> Gafquats< /RTI> 734 of the company Gaf cost, the USA driven out and by those one < RTI ID=10.7> Gafquate< /RTI> 734 particularly preferentially is suitable. Further kationische polymers are for example of the company BASF, Germany under that
Trade names < RTI ID=10.8> LUVIQUATX< /RTI> TC 550 refugees copolymer from Polyvinyl pyrrolidon and Imidazoliminmethochlorid, which < from the company Calgon/USA under the trade name; RTI ID=10.9> Merquate< /RTI> Plus 3300 refugees Terpolymer from Dimethyl diallylammoniumchlorid, sodium acrylate and acrylamide, which < from the company ISP/USA under the trade name Gaffixe VC 713 refugees Terpolymer from Vinylpyrrolidon, Dimethylaminoethylmethacrylat and Vinylcaprolactam and from the company Gaf under the trade name; RTI ID=11.1> Gafquats< /RTI> HS 100 refugees Vinylpyrrolidon/Methacrylamidopropyltrimethylammoniumchlorid copolymer.

Suitable ones kationische polymers, which are derived from natural polymers, are kationische derivatives of Polysacchariden, for example kationische derivatives of cellulose, strength or Guar. Suitably are further Chitosan and Chitosanderivate. Kationi Polysaccharide < RTI ID=11.2> aligemeine Formel< /RTI> (V) < RTI ID=11.3> G-0-B-N+R aRbRc x (V) < /RTI> G is a Anhydroglucoserest, for example strength or Celluloseanhydroglucose; B is a divalente liaison group, for example alkyls, Oxyalkylen, Polyoxyalkylen or hydroxyalkyls; RA, < RTI ID=11.4> Rb and Rc are unabhängig< /RTI> from each other alkyl, aryl, alkyl aryl, aryl alkyl, Alkoxyalkyl or Alkoxyaryl with in each case up to 18 C-atoms, whereby the total number of the C-atoms < in; RTI ID=11.5> RA, Rb and Rc< /RTI> preferably maximally 20 is; < RTI ID=11.6> X ist< /RTI> a usual Gegenanion, < the same meaning as with formula; RTI ID=11.7> (I) < /RTI> and preferably is chloride. A kationische cellulose is driven out under the designation polymer JR von Amerchol and was < RTI ID=11.8> INCI designation Polyquater < /RTI> nium-10. A further kationische cellulose carries the INCI designation Polyquaternium-24 and under the trade name polymer LM-200 von Amerchol is driven out. A suitable kationisches Guarderivat is < under; RTI ID=11.9> Trade name Jaguare R< /RTI> driven out and the INCI designation has Guar Hydroxypropyltrimonium of chloride.

Particularly preferential cation-active materials are Chitosan, < RTI ID=11.10> Chitosansalze< /RTI> and Chitosan derivatives. With the Chitosanen which can be used according to invention it acts over completely or partially deacetylierte itself Chitine. For the production of Chitosan one preferably proceeds from the Chitin contained in the bowl remainders of crustaceans, which as cheap and natural raw material is available in large quantities. The molecular weight of the Chitosans can be distributed over a broad spectrum, for example from 20. 000 to approx. 5 million g/mol. Suitably is for example a low-molecular Chitosan with a molecular weight of 30. 000 to 70. 000 g/mol.

Preferably the molecular weight lies however over 100. 000 g/mol, particularly prefers from 200. 000 to 700. 000 g/mol. The Deacetylierungsgrad amounts to preferably 10 to 99%, particularly prefers 60 to 99%.

A suitable Chitosan is < for example by the company Kyowa oil & Fat, Japan, under the trade name; RTI ID=12.1> Flonace< /RTI> driven out. It has a molecular weight of 300. 000 to 700. 000 g/mol and is entacetyliert to 70 to 80%. A preferential Chitosansalz is Chitosoniumpyrrolidoncarboxylat, soft for example under the designation Kytamer PC by the company Amerchol, the USA, is driven out. The contained Chitosan has a molecular weight of approx.

200. 000 to 300. 000 g/mol and is entacetyliert to 70 to 85%. When Chitosanderivate come quaternierte, or hydroxyalkylierte, for example Hydroxyethyl or Hydroxybutylchitosan in consideration alkylated derivatives.

The Chitosane or Chitosanderivate is present preferably in more neutralized or partially neutralized form. The neutralization degree for the Chitosan or the Chitosanderivat is preferably with at least 50%, particularly preferentially between 70 and 100%, related to the number of free groups of cousins.

As neutralization means in principle all cosmetically compatible inorganic or organic acids can be used as for example formic acid, tartaric acid, malic acid, lactic acid, citric acid, Pyrrolidoncarbonsäure, hydrochloric acid and. A., from which < RTI ID=12.2> Pyrrolidoncarbonsäure< /RTI> is particularly preferential.

Further suitable cation-active, hair-maintaining connections are kationisch modified protein derivatives or kationisch modified protein hydrolysates and are for example admit under < RTI ID=13.1> INCI designations Lauryldimonium< /RTI> Hydroxypropyl Hydrolyzed Wheat protein, < RTI ID=13.2> Lauryidimonium< /RTI> Hydroxypropyl Hydrolyzed Casein, < RTI ID=13.3> Lauryidimonium< /RTI> Hydroxypropyl Hydrolyzed collages, Lauryldimonium Hydroxypropyl Hydrolyzed Keratin, < RTI ID=13.4> Lauryidimonium Hydroxypropyl< /RTI> Hydrolyzed < RTI ID=13.5> Silk, Lauryldimonium Hydroxypropyl Hydrolyzed< /RTI> Soy protein or Hydroxypropyltrimonium Hydrolyzed Wheat, Hydroxypropyltrimonium Hydrolyzed Casein, Hydroxypropyltrimonium Hydrolyzed collages, Hydroxypropyltrimonium Hydrolyzed Keratin, Hydroxypropyltrimonium Hydrolyzed Rice Bran protein, Hydroxypropyltrimonium < RTI ID=13.6> Hydrolyzed< /RTI> Silk, Hydroxypropyltrimonium Hydrolyzed Soy protein, Hydroxypropyltrimonium Hydrolyzed Vegetable protein.

Suitable ones kationisch derivatisierte protein hydrolysates are substance mixtures, which < for example by conversion by alkalinely, sour or enzymatically hydrolyzed proteins with; RTI ID=13.7> Glycidyltrialkylammoniumsalzen< /RTI> or < RTI ID=13.8> 3-Halo-2-< /RTI> < RTI ID=13.9> hydroxypropyltrialkylammoniumsalzen< /RTI> to be received can. Proteins, which serve as basic materials for the protein hydrolysates, can be both vegetable and animal origin. Usual basic materials are for example Keratin, collages, Elastin, Sojaprotein, rice protein, milk protein, wheat protein, silk protein or < RTI ID=13.10> Mandelprotein.< /RTI> From the hydrolysis material mixtures with mol masses result within the range of approx. 100 to approx. 50. 000. Usual middle mol masses lie within the range of approximately 500 to approximately 1000. The kationisch derivatisierten protein hydrolysates or two long C8-bis C22-Alkylketten and according to two or short C1-bis a C4 alkyl chains contain favourable way. Connections, which contain a long alkyl chain, are preferential.

The hydrophilic groups of the hair-maintaining silicone connections (D) which can be used according to invention are preferably selected from hydroxyl groups, primary, secondary or tertiary amino groups, quaternären groups of ammonium, groups of alkyl oxides, betainischen groups and Thiosulfatgruppen.

Suitably and particularly preferential cation-active silicone connections are. These are substituted with kationischen or kationisierbaren groups. Suitable ones cation-active silicone connections exhibit either at least one amino group or at least one group of ammonium. Suitable silicone polymers with amino groups are well-known under the INCI designation Amodimethicone.

Here it concerns Polydimethylsiloxane with Aminoalkylgruppen. The Aminoalkylgruppen can be finalconstant side or. Suitable Aminosilikone is < such; RTI ID=14.1> aligemeinen formula (VI) < /RTI>
R8R9R10Si (OSiR11R12) x (OSiR13Q) y-OSiR14R15R16 (VI) R8, R9, < RTI ID=14.2> R'4 and R15 are unabhängig< /RTI> from each other directly or differently and C1-bis C10-Alkyl, Phenyl, Hydroxy, hydrogen, C1-bis C10-Alkoxy or Acetoxy mean, preferably < RTI ID=14.3> C1-C4-Alkyl, < /RTI> particularly methyl prefers; R' and < RTI ID=14.4> R'6< /RTI> are independently alike or different and < RTI ID=14.5> meaning (CH2) A-< /RTI> NH2 with A directly 1 to 6, C1-bis C10-Alkyl, Phenyl, Hydroxy, hydrogen, C1-bis < RTI ID=14.6> C10-Alkoxy oderAcetoxy, preferably C1-C4-Alkyl, < /RTI> particularly methyl prefers; < RTI ID=14.7> R ", < /RTI> R12 and < RTI ID=14.8> R'3< /RTI> and mean hydrogen, C1-bis are independently alike or different < RTI ID=14.9> C20-Kohlenwasserstoff, which O-und< /RTI> N of atoms contained knows, preferably C1-bis C10-Alkyl or Phenyl, particularly prefers C1-bis C4-Alkyl, in particular methyl; Q < RTI ID=14.10> bedeutet-A-NR'7 R'3, < /RTI> oder< RTI ID=14.11> A-N+R " R'$ R'9< /RTI> whereby A stands for divalente C1-bis C20-Alkylenverbindungsgruppe, which 0-und can contain N-atoms as well as OH-groups, and R ", R'8 and < RTI ID=14.12> R'9 unabhängig< /RTI> from each other same or different and hydrogen, C1-bis C22-Kohlenwasserstoff, preferably C1-bis C-4-Alkyl or Phenyl is means. Preferential remainders for Q < RTI ID=14.13> being (CH2) 3-NH2, - < /RTI> < RTI ID=14.14> (CH2) 3NHCH2CH2NH2, - (CH2) 3OCH2CHOHCH2NH2 and (CH2) 3N (CH2CH2OH) 2, - < /RTI> (CH2) 3-NH3+ and - (CH2) 3OCH2CHOCH2N+ (CH3) 2R20, whereby < RTI ID=14.15> R23 a C1-bis< /RTI> C22 alkyl residue is, which can exhibit also OH-groups; x means a number between 1 and 10. 000, preferably between 1 and 1. 000 ; y means a number between 1 and 500, preferably between 1 and 50.

The molecular weight of the Aminosilikone preferably lies between 500 and 100. 000. The amine portion < RTI ID=15.1> (meq/g) < /RTI> preferably 1 to 0, 5 is appropriate within the range of 0, 05 to 2, 3, particularly preferentially from 0.

Suitable silicone polymers with two finalconstant quaternären groups of ammonium are well-known under the INCI designation Quaternium-80. Here it concerns Dimethylsiloxane with two finalconstant Aminoalkylgruppen.

Suitable ones quaternäre Aminosilikone are < such; RTI ID=15.2> general formula (VII) < /RTI>
R21R22R23N+-A-SiR8R9 (OSiR11R12) n-OSiR8R9-A-N+R21R22R232X (VII) A < above the same meaning as with formula; RTI ID=15.3> (VI) < /RTI> indicated and is < RTI ID=15.4> preferably (CH2) 3OCH2CHOHCH2N+ (CH3) 2R2, whereby R20< /RTI> C1-bis C22 àlkyl residue is, which can exhibit also OH-groups; R8, < RTI ID=15.5> R9, < /RTI> < RTI ID=15.6> R " and R12< /RTI> the same meaning as with formula < above; RTI ID=15.7> (VI) < /RTI> indicated and preferably is methyl; < RTI ID=15.8> R2',< /RTI> < RTI ID=15.9> R22, < /RTI> and R23 mean independently C1-bis C22 of alkyl residues, which hydroxy groups can contain and whereby preferably at least one of the remainders exhibits at least 10 C-atoms and which remaining
Remainders of 1 to 4 C-atoms exhibit; n is a number from 0 to 200, preferably from 10 to 100. Such one < RTI ID=15.10> diquaternäre< /RTI> Polydimethylsiloxane become from that
Company GOLDSCHMIDT/Deutschland under the trade names < RTI ID=15.11> Abile< /RTI> Quat 3270, 3272 and 3274 drove out.

Suitable Silikone with groups of alkyl oxides is Polydimethylsiloxane with polyoxyalkylierten substituents, in particular Silikone, which are modified with polypropylene oxide, polyethylene oxide or their mixture. The alkyl oxide groups know thereby < RTI ID=15.12> seitenständig< /RTI> or finalconstantly its or it can itself over < RTI ID=15.13> Polydimethylsiloxan/Polyalkylenoxid of block copolymers handeln.< /RTI> The Siloxane modified with alkyls oxides also as Dimethylsiloxanglykolcopolymere or Dimethicon Copolyole are called. Suitable Silikone with hydroxyl groups is Dimethiconole. Here it concerns Polydimethylsiloxane with hydroxyl final's groups. Suitable Silikone with Thiosulfatgruppen is admits under the INCI designation Dimethicone/Sodium < RTI ID=16.1> PG-Propyidimethicone< /RTI> Thiosulfate copolymer.

The means according to invention is manufactured preferentially in an aqueous or in an aqueous-alcoholic environment and is particularly characterised by its clarity and transparency. Therefore the means favourable-proves also filled up into an optically responding packing from transparent or translucent, pressure resistant material. As packing material in particular glass and and transparent or translucent plastics come such as z. B. Polyethylenterephtalat in consideration. As alcohols in particular usually the low alcohols with 1 to 4 carbon atoms, used for cosmetic purposes, can being contained like for example ethanol and isopropanol. The water content amounts to preferably from 40 to 95, particularly preferential from 60 to 90 weight percentage. The alcohol content amounts to preferably by 1 to 30, particularly preferential from 5 to 20 weight percentage. Further one, particularly preferred < RTI ID=16.2> water-soluble Lösungs-bzw. Feuchthaltemittel< /RTI> multi-valued alcohols, in particular such with 2 to 4 carbon atoms as for example Glycerin, are ethyl glycol or propylene glycol in a quantity of 0, 1 to 10 thread. %, preferably of 0, 5 to 5 thread. %. Purely aqueous formulations are particularly preferential.

In a preferential execution form the means according to invention contains additionally at least a nichtionisches Tensid. Suitable ones nichtionische Tenside are for example in " international the Cosmetic the Ingredient Dictionary and Handbook ", 7. Edition, volume 2 in < RTI ID=16.3> Section " Surfactants Emulsifying< /RTI> Agents " specified nichtionischen emulsifying agents. Suitable ones nichtionische Tenside are preferably < RTI ID=16.4> ausgewähit< /RTI> from ethoxylierten fatty acids with 10 to 26 carbon atoms, ethoxylierten in or multi-valued alcohols with 1 to 6 carbon atoms, ethoxylierten Fettalkoholen with 10 to 26 carbon atoms, < RTI ID=16.5> ethoxyiertem< /RTI> hydrogenated or not hydrogenated castor-oil, Alkylpolyglucosiden, Glyceridalkoxylaten, < RTI ID=17.1> Fettsäuregiyceridpolyalkylenglykolethern< /RTI> or < RTI ID=17.2> Fettsäurepartialglyceridpoly < /RTI> alkylenglykolethern with less in each case than 30 alkyl glycol units as for example < RTI ID=17.3> Polyethylene glycol (7) - glycerylcocoat, Polyglykolamiden, Fettsäurezucker < /RTI> esters, ethoxylierten < RTI ID=17.4>

Fettsäurezuckerestern< /RTI> and < RTI ID=17.5> Partialglyceriden.< /RTI> The Ethoxylierungsgrad of ethoxylierten Tensiden amounts to usually from 1 to 400, preferably 2 to 200, particularly prefers 3 to 25.

In a preferential execution form are only < in the means according to invention; RTI ID=17.6> soiche< /RTI> Tenside and emulsifying agents contain, which < RTI ID=17.7> wasseriöslich< /RTI> are, D. h. such Tenside, which < with a content of 1 weight percentage in water with; RTI ID=17.8> 20 C< /RTI> are clearly soluble.

Preferential ones nichtionische Tenside are in particular Fettalkoholethoxylate.

Suitably for example alcohols with 10 to 18, preferably 10 to 16 C atoms and one are < RTI ID=17.9> Ethoxylierungsgrad< /RTI> from preferably 2 to 200, particularly prefers from 3 to 25. The additional nichtionischen Tenside becomes in a quantity of preferably 0, 01 to 5 thread. % assigned.

In a further preferential execution form the means according to invention contains additionally at least synthetic or natural polymer of film screen end, hair-strengthening. This additional polymer can have a nichtionischen, anionischen or amphoteren character and preferentially in a quantity of 0, 5 to 10 thread. % assigned. By film-forming, hair-strengthening polymers such polymers are understood, which in 0. 1 to 5% iger aqueous, alcoholic or aqueous-alcoholic solution able are applied to separate on the hair a polymer film and to strengthen the hair in this way.

The means according to invention can beyond that contain the auxiliary components usual for hair treatment means, for example not strengthening not ionische polymers, not strengthening anionische polymers and not strengthening natural polymers as well as their combination in a quantity of preferably 0, 01 to 10 thread. % ; Perfume oils in a quantity of preferably 0, 01 to 5 thread.

% ; Wetting agent or emulsifying agents from the classes of the anionischen, kationischen, amphoteren or nichtionogenen surface-active substances in a quantity of preferably 0. 01 to 10 thread. % ; Damp retaining means; Preservative, bactericidal and fungicides of active substances like for example 2, 4, 4-Trichlor-2-hydroxydiphenylether, Parabene or < RTI ID=18.1> Methylchlorisothiazolinon, < /RTI> in a quantity of 0, 01 to 1, 0 weight percentage; Puffersubstanzen, as for example sodium CIT advice or sodium phosphate, in a quantity of 0, 1 to 1, 0 weight percentage; < RTI ID=18.2> Anfärbestoffe, < /RTI> like for example Fluorescein sodium salt, in a quantity of approximately 0, 1 to 1, 0 weight percentage; Care materials, as < for example; RTI ID=18.3> Pflanzen-und of herb excerpts, < /RTI> Protein-und of silk hydrolysates, Lanolinderivate, in a quantity of 0, 1 to 5 weight percentage; Light-protective, Antioxidantien, radical inhibitor, anti-shed active substances, Fettalkohole, gloss givers, Vitamine and wax protective agents in a quantity of 0, 01 to 10 thread. %.

The means according to invention can be present in a pH range of 2, 0 to 9, 5. Particularly preferentially weakly sour pH values are in the range between 4, 5 and smaller 7, particularly preferential of 5, 5 to 6, 5. If the means according to invention within the sour range is present, then it can do organic or inorganic acids contained as for example formic acid, tartaric acid, malic acid, maleic acid, fumaric acid, < RTI ID=18.4> Glyoxylsäure, Pyrrolidoncarbonsäure, citric acid, < /RTI> Lactic acid, sulfuric acid, acetic acid, hydrochloric acid, phosphoric acid and. A.

The means according to invention is used, as for the desired conditioning effect sufficient quantity in or on the dry hair or after < RTI ID=18.5> Haarwäsche< /RTI> in or on the wet or damp hair one distributes.

The quantity which can be used hangs of < RTI ID=18.6> Haarfülle< /RTI> off and amounts to typically 1 to 25 G. With the preferential use as Rinse product the hair becomes ausge rinses after a sufficient impact time from for example 1 to 15 minutes. Subsequently, the hair is < RTI ID=19.1> if necessary durchgekämmt< /RTI> or formed to the hair-style and dried. In the case of a use as Leave in product the hair is not rinsed out after applying the means.

The following examples are to describe the the subject of the invention more near.

Example 1: Clear hair cure for strained hair 3, 0 g < RTI ID=19.2> Arquads 12-25 (25% industrial union, Lauryltrimoniumchlorid) < /RTI> 2, 0 g < RTI ID=19.3> Abile 9950 (30% industrial union, < /RTI> Dimethicone Propyl of PG-betaines) 1, < RTI ID=19.4> 1 g< /RTI> Pure one < RTI ID=19.5> Thixe rear spar (Polyether-1) < /RTI> 0, 5 < RTI ID=19.6> g< /RTI> < RTI ID=19.7> Brif< /RTI> 30 (Laureth-4) ad 100 < RTI ID=19.8> g< /RTI> Water the composition filled up with 8 thread. %, related to the total composition at Dimethylether.

Example 2: Clear one < RTI ID=19.9> Haarspülung< /RTI> for continuouscurved hair 1, 0 < RTI ID=19.10> g< /RTI> < RTI ID=19.11> Arquad# 12-50 (50%ig, Lauryltrimoniumchlorid) < /RTI> 0, 6 g < RTI ID=19.12> Tegobetaine< /RTI> (30% industrial union in water, Cocamidopropyl of betaines) 0, 8 g < RTI ID=19.13> Abile Quat< /RTI> 3272 (50% industrial union < in propylene glycol, Quaternium-80; RTI ID=19.14> diquaternäres< /RTI> Silicone) 0, 8 < RTI ID=19.15> g< /RTI> Pure one < RTI ID=19.16> Thixs L (PEG-180/Octoxynol-40/TMMG copolymer) < /RTI> 0, < RTI ID=19.17> 2 g Glyoxylsäure (1% ige solution) < /RTI> ad 100 g water the composition filled up with 2 thread. % related to the total composition at propane/butane as well as 6 thread. % related to the total composition at Dimethylether.

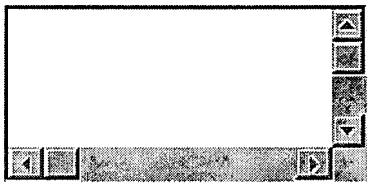
Example 3: Clear Leave in Treatment 1, 0 < RTI ID=20.1> g< /RTI> Tallowtrimoniumchlorid 2, 0 < RTI ID=20.2> g< /RTI> < RTI ID=20.3> Babil'S< /RTI> 201 (30% industrial union < in; RTI ID=20.4> Isopropanol/water, < /RTI> Dimethicone/Sodium < RTI ID=20.5> PG-Propyldimethicone Thiosulfate copolymer) < /RTI> 1, 1 g pure one < RTI ID=20.6> Thixe M (PEG-1 80/Laureth-50/TMMG copolymer) < /RTI> 3, 0 < RTI ID=20.7> g< /RTI> < RTI ID=20.8> Luviquats FC< /RTI> 905 (40% industrial union in water, Polyquaternium-16) ad 100 < RTI ID=20.9> g< /RTI> Water the composition filled up with 5 thread. %, related to the total composition at Dimethylether.

Example 4: Clear hair cure for untangling the hair 2, 5 < RTI ID=20.10> g< /RTI> < RTI ID=20.11> Arquads 12-50 (50% industrial union, Lauryltrimoniumchlorid) < /RTI> 1, 8 g < RTI ID=20.12> Abile< /RTI> Quat 3270 (50% industrial union < in propylene glycol, Quaternium-80; RTI ID=20.13> diquaternäres silicone) < /RTI> 1, 3 < RTI ID=20.14> g< /RTI> Pure one < RTI ID=20.15> Thins< /RTI> Rear spar (Polyether-1) 0, 3 g < RTI ID=20.16> Brij#30< /RTI> (Laureth-4) 0, 2 g citric acid (one percent solution) ad 100 g water the composition filled up with 10 thread. %, related to the total composition at Dimethylether.

Example 5: Clear one < RTI ID=20.17> Hair flushing particularly mild< /RTI> 0, 8 < RTI ID=20.18> g< /RTI> < RTI ID=20.19> Arquad# 12-25 (25%ig, Lauryltrimoniumchlorid) < /RTI> 1, 0 g Dow < RTI ID=20.20> Corning# 193< /RTI>

(Dimethicone Copolyol) 1, < RTI ID=20.21> 0 g< /RTI> Pure one < RTI ID=20.22> Thixs M (PEG-180/Laureth-50/TMMG copolymer) < /RTI> 0, 5 g < RTI ID=20.23> Rewoterice AM< /RTI> CAS (50% industrial union < in water, Cocamidopropyl; RTI ID=20.24> Hydroxysultaine) < /RTI> ad 100 < RTI ID=20.25> g< /RTI> Water the composition filled up with 6 thread. %, related to the total composition at Dimethylether as well as 3 thread. %, related to the total composition at F152a.

Example 6: Clear Leave in Treatment 1, 0 < RTI ID=21.1> g< /RTI> < RTI ID=21.2> Arquad#< /RTI> 12-50 < RTI ID=21.3> (50% industrial union, Lauryltrimoniumchlorid) < /RTI> 2, 0 < RTI ID=21.4> g< /RTI> < RTI ID=21.5> Abil# 8863< /RTI> (Dimethicone Copolyol) 0, 9 < RTI ID=21.6> g< /RTI> Pure one < RTI ID=21.7> Thixe rear spar (Polyether-1) < /RTI> 0, 5 < RTI ID=21.8> g< /RTI> < RTI ID=21.9> Luviskole K30 (Polyvinylpyyrolidon) < /RTI> ad < RTI ID=21.10> 100 g< /RTI> Water the composition filled up with 5 thread. %, related to the total composition at Dimethylether.



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Patent claims 1. Composition for a hair treatment means with a content of (A) at least a nichtionischen, amphiphilen < RTI ID=22.1> Assoziativerdicker< /RTI> in a suitable cosmetic basis and (B) at least one propellant.

2. Composition according to requirement 1, by the fact characterized that that
Associatively selected are out hydrophob modified Polyalkylen glycols.

3. Composition after one of the preceding requirements, by the fact characterized that the associative-thick is selected out hydrophob modified < RTI ID=22.2> Aminoplast/Polyether< /RTI> Copolymers.

4. Composition after one of the preceding requirements, by the fact characterized that the associative-thick is selected from polymers < RTI ID=22.3> aligemeinen formula (I) < /RTI>
EMI22.1
whereby Amp a Aminoplastmonomer means or the remainder of a Aminoplastoligomers of or polymer, AO for a group of alkyl oxides stands, for R for water material, < RTI ID=22.4> C1-C4-Alkyl< /RTI> or < RTI ID=22.5> C1-C4-Acyl< /RTI> and x and y numbers stand for 1 are larger.

5. Composition after one preceding requirements, by the fact characterized that the thick is selected from the reaction products < RTI ID=22.6> säurekatalysierten< /RTI> Reaction of Glycolurilderivaten and Polyalkylenglykden and alkoxylierten hydrocarbons.

6. Composition after one preceding requirements, by the fact characterized that the thick is selected from Polyether-1, PEG< RTI ID=23.1> 180/Octoxynol-40/TMMG copolymer and PEG-180/Laureth-50/TMMG< /RTI>
Copolymer.

7. Composition after one preceding requirements, by the fact characterized that the propellant is selected from n-butane, ISO butane,
Propane, Dimethylether, fluorocarbons and mixtures of the propellants mentioned.

8. Composition after one of the preceding requirements, by the fact characterized that it < additionally at least one; RTI ID=23.2> haarpflegenden< /RTI> Material (C) contains, which exhibits at least an cation-active group.

9. Composition according to requirement 8, by the fact characterized that that is selected hair maintaining cation-active material from cation-active Tensiden,
Polymere one with kationischen or kationisierbaren groups, kationisch deriva tisierten proteins, kationisch derivatisierten protein hydrolysates and betaine.

10. Composition according to requirement 9, by the fact characterized that the kationische Tensid is selected from connections of the formula < RTI ID=23.3> (III) < /RTI> < RTI ID=23.4> N (+) R'R2R3R4 X (-) (111) < /RTI>
whereby g 1 to R4 independently aliphatic groups, aromatic
▲ top Groups, alkoxy groups, Polyoxyalkylengruppen, Alkylamidogruppen, Hydroxy alkyl groups, groups of aryls or groups of alkene aryls with 1 to 22 C-atoms mean and < RTI ID=23.5> X (~) ein< /RTI> Anion represents.

11. Composition according to requirement 9, by the fact characterized that that
Polymere with kationischen or kationisierbaren groups selected is out < RTI ID=23.6>
MethylvinylimidazoliumchloridNinylpyrrolidon copolymers, < /RTI> quaternisierten
Vinylpyrrolidon/Dimethylaminoethylmethacrylat copolymers, kationisch derivatisierten Polysacchariden, Chitosan, Chitosansalzen and Chitosan derivatives.

12. Composition after one of the preceding requirements, by the fact characterized that it contains additionally at least one silicone connection (D), which exhibits at least a hydrophilic group.

13. Composition according to requirement 12, by the fact characterized that the hydrophilic group of the silicone connection is selected from hydroxyl groups, primary, quaternären secondary or tertiary amino groups, ammonium groups, groups of alkyl oxides, betainischen groups and Thiosulfatgruppen.

14. Composition according to requirement 12 or 13, by the fact characterized that the silicone connection with at least a hydrophilic group is selected, hydroxysubstituierten from silicone connections with kationischen groups
Siloxane, Siloxan/Polyoxyalkylen copolymers and aminosubstituierten
Siloxane.

15. Hair treatment means marked by a content in a composition after one of the preceding requirements, by the fact that it is present in an optically clear form.

16. < RTI ID=24.1> Haarbehandiungsprodukt< /RTI> consisting of a transparent or by seeming packing containing a composition after one of the preceding requirements.